

Product/Service Description Document
Implementation of Wireless Emergency Alert (WEA) Changes for
Flash Flood Warnings
February 12, 2020

Part I - Mission Connection

- a. Product/Service Description - The National Weather Service (NWS) will issue WEAs for Flash Flood Warnings (FFW) based on damage threat tags. WEAs will be limited to only those FFWs with the damage threat tags of "Considerable" or "Catastrophic" using the new 90 character messaging. The text of these alerts reflects the severity of the threat by including flash flood emergency language where warnings tags indicate "Catastrophic" damage is likely.
- b. Product Type - Operational
- c. Purpose - This effort is a subset of the overall NWS Hazard Simplification (Haz Simp) project. This product enhances the NWS Flash Flood Services by characterizing the damage threat using machine-readable tags. With this change, NWS is aiming to improve the public response to flash flood warnings by issuing WEA alerts only for flash flood events that require immediate life-saving action, as indicated by a damage threat tag of "Considerable" or "Catastrophic."
- d. Audience - The target audiences for these products are customers and partners such as emergency managers, state and local officials including School Superintendents, Departments of Transportation, media and the general public. These proposed changes affect all NWS Weather Forecast Offices.
- e. Presentation Format - These are 90 character messages in English that are disseminated to the Federal Emergency Management Agency's (FEMA) Integrated Public Alert and Warning System (IPAWS) for delivery to Wireless Emergency Alerts.
- f. Feedback Method - Feedback on the Implementation of WEA Changes for FFWs (below) may be addressed to:

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Part II - Technical Description

- a. Format and Science Basis - NWS offices issue more than 4,000 FFWs each year for events with a range of impacts on lives and livelihoods. User perception is that NWS over-alerts flash flood warnings. FEMA has also noted a large number of complaints about WEA alerts for FFWs during overnight periods with perceived little impact. With this change, NWS is aiming to improve the public response to WEA alerts for those flash flood events that require immediate life-saving action.

The flash flood damage threat characterization will include:

- **Base** - Most flash floods, with the potential for impacts and damage.
 - **Considerable** - Flash floods capable of unusual severity of impact where urgent action is needed to protect lives and property.
 - **Catastrophic** - Exceedingly rare, violent flash floods which threaten lives and cause disastrous damage when floodwaters are placing or will place people in life-threatening situations by rapidly rising to levels rarely, if ever, seen. Catastrophic flash flood damage threat tags will only appear in FFWs which include flash flood emergency language.
- b. Availability - WEA is a joint effort between the Federal Communications Commission (FCC), the Federal Emergency Management Agency (FEMA), and the wireless industry that allows emergency alerting authorities to geographically target emergency messages to mobile devices, primarily cell phones. The NWS will provide messages to WEA for hazards believed to be life-threatening and that have consequences that can be mitigated or minimized by immediate action.

Proposed Examples for WEA Messages for Flash Floods:

A. Example WEA Message for FFWs with a FLASH FLOOD DAMAGE THREAT tag of "Considerable":

NWS: FLASH FLOOD WARNING this area til 11:00AM EDT. Avoid flooded areas.

B. Example WEA Message for FFWs with a FLASH FLOOD DAMAGE THREAT tag of "Catastrophic":

NWS: FLASH FLOOD EMERGENCY this area til 11:00AM EDT. Avoid flooded areas.